

Abstract.

A method for restarting a three-phase synchronous permanent magnet motor in which the rotor is still rotating and in which the motor is connected to a drive unit having a DC-stage with voltage measuring means, a variable voltage and frequency output stage including power switching devices, and a means for determining the current in two of the output phases from the drive unit, wherein the motor with the output stage is momentarily short-circuited, the current magnitudes generated by the motor in the two output phases are measured during the short-circuiting moment, the phase angle generated by the motor during the short-circuiting moment is calculated, the rotor speed is determined, and the drive unit is synchronized with the rotor to enable restarting of the motor.